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for the many types of management information; and modulating the content data of which the first encoding process has been performed and the many types of management information of which the second encode process has been performed.

IN THE CLAIMS

Please amend claims 1-10, 13-47, 49-74, 76-84, 86, and 89-96 by rewriting same to read as follows.

--1. (Amended) A record medium having recorded thereon a plurality of types of management information corresponding to a plurality of types of record media with content data.

--2. (Amended) The record medium as set forth in claim 1, wherein the plurality of types of management information is embedded as additional information to the content data.

--3. (Amended) The record medium as set forth in claim 2, wherein the management information is spectrum-spread and superimposed over the content data.

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--4. (Amended) The record medium as set forth in claim 2, wherein the management information is inserted into a low order bit of the content data.

--5. (Amended) The record medium as set forth in claim 2, wherein the management information is inserted into a high order coefficient of the content data that has been compressed.

--6. (Amended) The record medium as set forth in claim 2, wherein the management information is inserted into the content data using a masking effect so the management information does not adversely affect the content data.

--7. (Amended) The record medium as set forth in claim 2, wherein the management information is inserted into one of a first peak and a second peak in one of a predetermined range of the content data and in

the vicinity of one of the first peak and the second peak.

--8. (Amended) The record medium as set forth in claim 2,

wherein the management information contains at least sync data, original medium type representation identification information, copy condition representation information, and generation management information.

--9. (Amended) The record medium as set forth in claim 1,

wherein the record medium has a data record area the content data is recorded, the plurality of types of management information being recorded to the data record area.

--10. (Amended) The record medium as set forth in claim 9,

wherein the plurality of types of management information is recorded to an area designated for sub code data in the data record area.

--13. (Amended) The record medium as set forth in claim 9, further comprising:

an area where index data is recorded, the area being read before the data record area, the plurality of types of management information being recorded to the area where index data is recorded.

--14. (Amended) The record medium as set forth in claim 1,

wherein the plurality of types of management information is first management information for reproduction-only record media and second management information for recordable record media.

--15. (Amended) The record medium as set forth in claim 14,

wherein the first management information and the second management information is information that contains at least one of copy management information, charging management information, and reproduction management information.

--16. (Amended) The record medium as set forth in claim 15,

wherein the copy management information is information for controlling

at least one of a recording operation and a reproducing operation for content data that is read from the record medium.

--17. (Amended) The record medium as set forth in claim 1, wherein the plurality of types of management information is provided corresponding to record media that are an original record medium and a non-original record medium.

--18. (Amended) A recording method for a record medium, comprising the steps of:

embedding a plurality of types of management information corresponding to a plurality of types of record media as additional information to content data that is recorded;

performing a first encoding process for the content data to which the additional information has been embedded;

performing a second encoding process for the plurality of types of management information; and

modulating the content data of which the first encode process has been performed and the plurality of types of management information of which the second encode process has been performed.

--19. (Amended) A recording method for a record medium, comprising the steps of:

determining a type of a record medium to which a plurality of types of management information corresponding to a plurality of types of record media have been recorded along with content data; and

controlling a recording operation for the content data that has been read from the record medium corresponding to the management information corresponding to the type of record medium determined in the determining step.

--20. (Amended) The recording method for the record medium as set forth in claim 19,

wherein the plurality of types of management information contains first management information for reproduction-only record media and second management information for recordable record media, and

wherein the controlling step is performed by controlling the recording operation corresponding to the first management information when a result determined at the determining step represents that the record medium is a reproduction-only record medium and by controlling the recording operation corresponding to the second management information when the a result determined at the determining step represents that the record medium is a recordable record medium.

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--21. (Amended) The recording method for the record medium as set forth in claim 20,

wherein the controlling step is performed by prohibiting the recording operation for the content data that is read from the record medium when the result determined at the determining step represents that the record medium is a reproduction-only record medium and the second management information prohibits the recording operation of the content data that is read from the record medium.

--22. (Amended) The recording method for the record medium as set forth in claim 20, wherein said record medium comprises a first record medium, and the recording method further comprises the step of:

when the content data that is read from the first record medium as a copy source is recorded to a second record medium as a copy destination, recording the plurality of types of management information to the second record medium as the copy destination along with the content data that is read from the first record medium as the copy source.

--23. (Amended) The recording method for the record medium as set forth in claim 22,

wherein the management information contains at least one of information that represents a generation and information that represents a condition in which the data of the content that is read from the first record medium as the copy source is recorded to the second record medium as the copy destination.

--24. (Amended) The recording method for the record medium as set forth in claim 22,

wherein when the content data that is read from the first record medium as a copy source is recorded to the second record medium as a copy destination, the controlling step is performed by controlling the recording operation for the content data that is read from the first record medium as the copy source corresponding to the second management information.

--25. (Amended) The recording method for the record medium as set forth in claim 24,

wherein the controlling step is performed by prohibiting the content data that is read from the first record medium from being recorded.

--26. (Amended) The recording method for the record medium as set forth in claim 19,

wherein a result determined at the determining step represents that the record medium is a recordable record medium and management information permits the recording operation for the content data that is read from the record medium, the controlling step is performed by performing the recording operation for the content data that is read from the record medium as the copy source corresponding to the management information and rewriting the management information so that it prohibits a further recording operation for the content data.

--27. (Amended) An output controlling method, comprising the steps of:
reading content data and a plurality of types of management information from a record medium, the plurality of types of management information

provided corresponding to a plurality of types of record media being embedded to the content data, the plurality of types of management information being recoded in a predetermined area of the record medium;

extracting the plurality of types of management information from the content data that is read from the record medium;

collating the plurality of types of management information that are extracted with the plurality of types of management information that are read from the record medium; and

controlling an output of the content data that is read corresponding to a collated result.

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--28. (Amended) The output controlling method as set forth in claim 27, wherein when the plurality of management information that is extracted does not match the plurality of types of management information that is read from the record medium, the controlling step is performed by not permitting the content data that is read from the record medium to be output.

--29. (Amended) The output controlling method as set forth in claim 28, wherein when the plurality of types of management information that is extracted match the plurality of types of management information that is read from the record medium, the controlling step is performed by controlling the output of the content data that is read from the record medium corresponding to the plurality of types of management information that is read from the record medium.

--30. (Amended) The output controlling method as set forth in claim 29, further comprising the step of:

determining a type of the record medium,

wherein the controlling step is performed by controlling the output of the content data that is read corresponding to a management condition selected corresponding to the type of the record medium determined from the plurality

of types of management information.

--31. (Amended) A reproducing apparatus for a record medium, comprising:

a reading portion for reading content data and a plurality of types of management information from the record medium, the plurality of types of management information provided corresponding to a plurality of types of record media being embedded to the content data, the plurality of types of management information being recoded in a predetermined area of the record medium;

an extracting portion for extracting the plurality of types of management information from the content data that is read from the record medium by said reading portion;

a collating portion for collating the plurality of types of management information that are extracted by said extracting portion with the plurality of types of management information that are read from the record medium by said reading portion; and

an output controlling portion for controlling an output of the content data that is read corresponding to the collated result by the collating portion.

--32. (Amended) The reproducing apparatus for the record medium as set forth in claim 31,

wherein when the plurality of management information that is extracted by said extracting portion does not match the plurality of types of management information that is read from the record medium by said reading portion, said output controlling portion does not permit the content data that is read from the record medium to be output.

--33. (Amended) The reproducing apparatus for the record medium as set forth in claim 32,

wherein said output controlling portion has a switch circuit portion,

and

wherein when a collated result of said collating portion represents that the plurality of types of management information extracted by said extracting portion does not match the plurality of types of management information that is read from the record medium by said reading portion, said switch circuit portion is opened.

--34. (Amended) The reproducing apparatus for the record medium as set forth in claim 33,

wherein when the collated result of said collating portion represents that the plurality of types of management information extracted by said extracting portion match the plurality of types of management information that is read from the record medium by said reading portion, said switch circuit portion is closed and thereby the content data that is read from the record medium corresponding to the plurality of types of management information that is read from the record medium is output through said switch circuit portion.

--35. (Amended) The reproducing apparatus for the record medium as set forth in claim 31, further comprising:

a determining portion for determining a type of record medium corresponding to a signal that is read from the record medium by said reading portion,

wherein one of the plurality of types of management information that is read from the record medium by said reading portion is selected corresponding to a result determined by said determining portion,

wherein one of the plurality of types of management information extracted by said extracting portion is selected, and

wherein the selected management information is supplied to said collating portion.

--36. (Amended) The reproducing apparatus for the record medium as set

forth in claim 35,

wherein said determining portion comprises a first determining portion and said output controlling portion further comprises:

a second determining portion for determining a selected management condition corresponding to the result determined by said first determining portion; and

a switch circuit portion for controlling the output of the content data that is read from the record medium, an open state and a closed state of said switch circuit portion being controlled by an output of said second determining portion.

--37. (Amended) The reproducing apparatus for the record medium as set forth in claim 31,

wherein said extracting portion comprises a first extracting portion and said reading portion has:

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a head portion for reading the content data and the plurality of types of management information from the record medium;

a demodulating portion for decoding an output signal of said head portion;

a second extracting portion for extracting the plurality of types of management information from output data of said demodulating portion; and

an error correction processing portion for performing an error correcting process for output data of said demodulating portion and supplying the resultant output data to said second extracting portion.

--38. (Amended) A record and reproduction controlling method for a record medium, comprising the steps of:

reading content data and a plurality of types of management information from a record medium, the plurality of types of management information provided corresponding to a plurality of types of record media being embedded

as additional information to the content data, the plurality of types of management information being recoded in a predetermined area of the record medium;

extracting the additional information from the content data that is read from the record medium;

collating the plurality of types of management information that are contained in the extracted additional information with the plurality of types of management information that are read from the record medium; and

controlling an output of the data of the content that is read corresponding to a collated result.

--39. (Amended) The record and reproduction controlling method for the record medium as set forth in claim 38,

wherein when the plurality of types of management information that is contained in the extracted additional information does not match the plurality of types of management information that is read from the record medium, the controlling step is performed by not permitting the data of the content that is read from the record medium to be output.

--40. (Amended) The record and reproduction controlling method for the record medium as set forth in claim 39,

wherein when the plurality of types of management information that are contained in the extracted additional information match the plurality of types of management information that is read from the record medium, the controlling step is performed by controlling the output of the content data that is read from the record medium corresponding to the plurality of types of management information that is read from the record medium.

--41. (Amended) The record and reproduction controlling method for the record medium as set forth in claim 40, further comprising the step of:

determining a type of the record medium,

wherein the controlling step is performed by controlling the output of the content data that is read corresponding to a management condition selected corresponding to the type of the record medium determined from the plurality of types of management information.

--42. (Amended) The record and reproduction controlling method as set forth in claim 41,

wherein said recording medium comprises a first recording medium and when the content data that is read corresponding to the selected management information is recorded to a second record medium, the controlling step is performed by recording the content data that is read from the first record medium and the plurality of types of management information to the second record medium.

--43. (Amended) reproducing method for a record medium, comprising the steps of:

determining a type of the record medium, content data and at least reproduction management information for reproduction-only record media and reproduction management information for recordable record media being recorded to the record medium; and

controlling a reproducing operation corresponding to the reproduction management information selected corresponding to the type of the record medium determined from a plurality of types of reproduction management information.

--44. (Amended) The reproducing method for the record medium as set forth in claim 43,

wherein the controlling step is performed by switching a charging process for the content data that is reproduced corresponding to the selected reproduction management information.

--45. (Amended) A recording method, comprising the steps of:

first determining a type of a record medium, a plurality of types of

management information provided corresponding to types of record media being recorded to the record medium along with content data, the plurality of types of management information containing copy management information;

secondly determining whether the record medium is an original record medium corresponding to the management information that is read from the record medium and the type of the record medium determined at the first determining step; and

when a result determined at the first determining step represents that the record medium is an original record medium, controlling a recording operation for the content data that is read from the record medium to another record medium corresponding to the copy management information.

--46. (Amended) The recording method as set forth in claim 45, wherein said determining step comprises a first determining step and

when the management information that is read from the record medium matches the type of the record medium determined at the first determining step, a result determined at the second determining step represents that the record medium is an original record medium.

--47. (Amended) The recording method as set forth in claim 45, wherein said determining step comprises a first determining step and the recording method further comprises the steps of:

when a result determined at the second determining step represents that the record medium is not an original record medium, determining whether the copy management information permits a copy operation to be performed in one generation; and

when the copy management information permits a copy operation to be performed in one generation, advancing the generation of the copy management information by one,

wherein a controlling step is performed by controlling the recording

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operation corresponding to the copy management information of which the generation has been advanced by one.

--49. (Amended) The recording method as set forth in claim 47, wherein when the copy management information does not permit a copy operation to be performed in one generation, the controlling step is performed by controlling the recording operation corresponding to the copy management information.

--50. (Amended) The recording method as set forth in claim 45, wherein the determining step comprises a first determining step and the recording method further comprises the step of:

when a result determined at the second determining step represents that the record medium is not an original record medium, determining whether the copy management information permits a copy operation to be performed in one generation; and

when the copy management information permits the copy operation to be performed in one generation, rewriting the copy management information to prohibit a copy operation,

wherein a controlling step is performed by controlling the recording operation corresponding to rewritten copy management information.

--51. (Amended) A recording method, comprising the steps of:

first determining a type of a first record medium, a wherein plurality of types of management information corresponding to a plurality of types of record media is recorded on the first record medium, and wherein the plurality of types of management information include identification information, copy generation information, and copy management information;

secondly determining whether the first record medium is an original record medium corresponding to the management information that is read from the first record medium and the type of the first record medium determined at

the first determining step; and

when the result determined at the second determining step represents that the first record medium is an original record medium, advancing the copy generation information by one and controlling a recording operation for recording content data that is read from the first record medium to a second record medium corresponding to the copy management information.

--52. (Amended) The recording method as set forth in claim 51,

wherein a controlling step is performed by controlling the recording operation for the content data that is read from the first record medium and the management information that contains the copy generation information that has been advanced by one generation corresponding to the copy management information.

--53. (Amended) The recording method as set forth in claim 52,

wherein the second determining step is performed by determining whether the first record medium is an original record medium corresponding to a result of the first determining step, the identification information, and the copy generation information.

--54. (Amended) The recording method as set forth in claim 52,

wherein when a result determined at the second determining step represents that the first record medium is not an original record medium, the controlling step is performed by advancing the copy generation information by one,

wherein when the content data that is read from the first record medium is recorded to the second record medium, the controlling step is performed by advancing the copy generation information by one and performing the recording operation for recording the resultant copy generation information to the second record medium along with the content data that is read from the first record medium.

--55. (Amended) The recording method as set forth in claim 51, wherein the management information further contains charging information, and

wherein when the content data read from the first record medium is recorded to the second record medium corresponding to the copy management information, a controlling step is performed by a charging process corresponding to the charging information.

--56. (Amended) A reproducing method, comprising the steps of:

first determining a type of a record medium, a plurality of types of management information provided corresponding to a plurality of types of record media being recorded to the record medium along with content data;

secondly determining whether the record medium is an original record medium corresponding to the management information that is read from the record medium and the type of the record medium determined at the first determining step; and

when a result determined at the second determining step represents that the record medium is an original record medium, performing a reproducing operation for the record medium corresponding to the management information.

--57. (Amended) The reproducing method as set forth in claim 56, further comprising the step of:

when the result determined at the second determining step represents that the record medium is not an original record medium, prohibiting the record medium from being reproduced.

--58. (Amended) The reproducing method as set forth in claim 57, wherein the management information contains copy generation information, and

wherein the reproducing method further comprises the step of:

when the result determined at the second determining step represents

that the record medium is not an original record medium, advancing the copy generation information by one.

--59. (Amended) The reproducing method as set forth in claim 57, wherein the management information further contains charging information, and

wherein the reproducing method further comprises the step of:
when the content data read from the record medium is reproduced corresponding to the charging information, performing a charging process corresponding to the charging information.

--60. (Amended) A recording and reproducing method, comprising the steps of:

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first determining a type of a first record medium, wherein a plurality of types of management information corresponding to a plurality of types of record media is recorded on the first record medium, and wherein the plurality of types of management information include copy generation information and copy management information;

secondly determining whether the first record medium is an original record medium corresponding to the management information that is read from the first record medium and the type of the record medium at the first determining step;

when a result determined at the second determining step represents that the first record medium is an original record medium, reproducing the first record medium corresponding to the management information; and

advancing the copy generation information by one and controlling a recording operation for recording content data that is read from the first record medium to a second record medium corresponding to the copy management information.

--61. (Amended) The recording and reproducing method as set forth in

claim 60,

wherein a controlling step is performed by controlling the recording operation for the content data that is read from the first record medium and the management information that contains the copy generation information that has been advanced by one generation corresponding to the copy management information.

--62. (Amended) The recording and reproducing method as set forth in claim 61,

wherein the second determining step is performed by determining whether the first record medium is an original record medium corresponding to the first record medium determined at the first determining step, the identification information, and the copy generation information.

--63. (Amended) The recording and reproducing method as set forth in claim 60, further comprising the step of:

wherein when the result determined at the second determining step represents that the first record medium is not an original record medium, prohibiting the first record medium from being reproduced.

--64. (Amended) The recording and reproducing method as set forth in claim 60,

wherein when the result determined at the second determining step represents that the first record medium is not an original record medium, the controlling step is performed by advancing the copy generation information by one and controlling a reproducing operation for the first record medium corresponding to the management information,

wherein when the content data read from the first record medium is recorded to the second record medium, the controlling step is performed by advancing the copy generation information by one and controlling the recording operation for recording the content data read from the first record medium to

the second record medium corresponding to the management information.

--65. (Amended) A recording method, comprising the steps of:

identifying a type of a first record medium, the first record medium having an identification portion used to identify the type of the first record medium, at least first management information for a reproduction-only record medium and second management information for recordable record media being recorded to the first record medium along with content data; and

controlling a recording operation for recording the content data that is read from the first record medium along with the first management information and the second management information to a second record medium corresponding to the first management information, when the type of the first record medium determining at the determining step represents that the first record medium is a reproduction-only record medium, and a recording operation for recoding the content data that is read from the record medium along with the first management information and the second management information to the second record medium corresponding to the second management information, when the type of the first record medium determined at the determining step represents that the record medium is a recordable record medium.

--66. (Amended) The recording method as set forth in claim 65,

wherein when the content data that is read from the first record medium is recorded to the second record medium corresponding to the second management information, the controlling step is performed by rewriting the second management information so that it prohibit the recording operation.

--67. (Amended) The recording method as set forth in claim 66,

wherein when the content data that is read from the first record medium is recorded to the second record medium corresponding to the first management information, the controlling step is performed by not rewriting the first management information and the second management information.

--68. (Amended) The recording method as set forth in claim 65,
wherein the first management information and the second management
information are embedded to the content data and recorded to the first record
medium, the first management information and the second management information
being recorded in a predetermined area of the first record medium, and
wherein the recording method further comprises the step of:

collating the management information selected corresponding to the type
of the first record medium from the first management information and the
second management information extracted from the content data that is read
from the first record medium with the management information selected
corresponding to the type of the first record medium determined from the first
management information and the second management information that are read
from a predetermined area of the first record medium, and

wherein when one of the first management information and the second
management information that is extracted from the content data matches one of
the first management information and the second management information that is
read from the first record medium, a controlling step is performed by
permitting the content data that is read from the first record medium to be
output to the second record medium.

--69. (Amended) The recording method as set forth in claim 68,
wherein when one of the first management information and the second management
information that is extracted from the content data does not match one of the
first management information and the second management information that is
read from the first record medium, the controlling step is performed by
prohibiting the content data that is read from the first record medium from
being output to the second record medium.

--70. (Amended) The recording method as set forth in claim 68,
wherein when one of the first management information and the second

management information that is extracted from the content data matches one of the first management information and the second management information that is read from the first record medium and when the management information selected from the first management information and the second management information corresponding to a result of the record medium permits the content data that is read from the first record medium to be recorded, the controlling step is performed by permitting the content data that is read from the first record medium to be output.

--71. (Amended) A recording and/or reproducing method, comprising the steps of:

first determining a type of a record medium, wherein the record medium has an identification portion used to identify the type thereof, management information contains at least identification information, the record medium has copy generation information, and the record medium has copy management information being recoded to the record medium along with content data;

secondly determining whether the record medium is an original record medium corresponding to a result of the record medium, at least the identification information, and the copy generation information that are read from the record medium; and

controlling a recording operation and/or a reproducing operation for the record medium corresponding to a result determined at the second determining step.

--72. (Amended) The recording and/or reproducing method as set forth in claim 71,

wherein when the result determined at the second determining step represents that the record medium is an original record medium, the controlling step is performed by controlling the reproducing operation for the record medium corresponding to the management information.

--73. (Amended) The recording and/or reproducing method as set forth in claim 71, wherein the record medium comprises a first record medium, and wherein when the result determined at the second determining step represents that the first record medium is an original record medium, the controlling step is performed by recording the content data that is read from the first record medium to a second record medium corresponding to the copy management information and the copy generation information, advancing the copy generation information by one, and recording the content data and the resultant copy generation information to the second record medium.

--74. (Amended) The recording and/or reproducing method as set forth in claim 71,

wherein when the result determined at the second determining step represents that the record medium is not an original record medium, the controlling step is performed by advancing the copy generation information that is read from the record medium by one generation.

--76. (Amended) The recording and/or reproducing method as set forth in claim 74,

wherein the controlling step is performed by recording the content data that is read from the first record medium to the second record medium corresponding to the copy management information and the copy generation information, advancing the copy generation information by one, and recoding the content data and the copy generation information to the second record medium.

--77. (Amended) The recording and/or reproducing method as set forth in claim 71,

when the result determined at the second determining step represents that the record medium is an original record medium, the controlling step is performed by prohibiting the record medium from being reproduced.

--78. (Amended) Content data with a plurality of types of management information provided corresponding to a plurality of types of record media embedded as additional information to the content data.

--79. (Amended) The content data as set forth in claim 78, wherein the additional information is spectrum-spread and superimposed to the content data.

--80. (Amended) The content data as set forth in claim 78, wherein the additional information is inserted into a low order bit of the content data.

--81. (Amended) The content data as set forth in claim 78, wherein the additional information is inserted into a high order coefficient of which the content data has been compressed.

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--82. (Amended) The content data as set forth in claim 78, wherein the additional information is inserted into the content data using a masking effect so the additional information does not adversely affect the content data.

--83. (Amended) The content data as set forth in claim 78, wherein the additional information is inserted into one of a first peak in a predetermined range of the content data, a second peak in the predetermined range of the content data, the vicinity of the first peak, and the vicinity of the second peak.

--84. (Amended) The content data as set forth in claim 78, wherein a plurality of types of management information are first management information for reproduction-only record media and second management information for recordable record media.

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--86. (Amended) The content data as set forth in claim 78, wherein the additional information contains at least sync data, original medium type representation identification information, copy condition

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representation information, and generation management information.

--89. (Amended) A record medium having an identification portion used to identify the type thereof, wherein data of a content is recorded to the record medium, a plurality of types of management information is provided corresponding to a plurality of types of record media being embedded as additional information to the content data, and the plurality of types of management information is recorded in a predetermined area of the record medium.

--90. (Amended) The record medium as set forth in claim 89, wherein the additional information is inserted into a low order bit of the content data.

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--91. (Amended) The record medium as set forth in claim 89, wherein the additional information is inserted into a high order coefficient of which the content data has been compressed.

--92. (Amended) The record medium as set forth in claim 89, wherein the additional information is inserted into the content data using a masking effect so the additional information does not adversely affect the content data.

--93. (Amended) The record medium as set forth in claim 89, wherein the additional information is inserted into one of a first peak in a predetermined range of the content data, a second peak in a predetermined range of the content data, a vicinity of the first peak, and the vicinity of the second peak.

--94. (Amended) The record medium as set forth in claim 89, wherein the additional information is spectrum-spread and superimposed over the content data.

--95. (Amended) The record medium as set forth in claim 89, wherein the plurality of types of management information are first

management information for reproduction-only record media and second management information for recordable record media.

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--96. (Amended) The record medium as set forth in claim 95,
wherein the first management information and the second management information contain at least one of copy management information, charging management information, and reproduction management information.
